

AMENDMENTS TO THE CLAIMS:

1.-18. (Cancelled)

19. (Currently Amended) A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a length and defining external threads extending substantially entirely along said length, said elongate body being substantially continuously tapered along said length and at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into said elongated body.

20. (Previously Presented) The fusion device of claim 19, wherein said porous biocompatible material is a composite comprising an open-celled substrate having interconnected porosity, said open-celled substrate infiltrated with a metal.

21. (Previously Presented) The fusion device of claim 20, wherein said open-celled substrate is a carbonaceous material.

22. (Previously Presented) The fusion device of claim 20, wherein said open-celled substrate is a carbon foam.

23. (Previously Presented) The fusion device of claim 20, wherein said metal comprises a group VB metal.

24. (Previously Presented) The fusion device of claim 23, wherein said metal is tantalum.

25. (Previously Presented) The fusion device of claim 19, wherein said porous biocompatible material has a modulus of elasticity approximately equal to a modulus of elasticity of human bone.

26. (Currently Amended) ~~The fusion device of claim 19, wherein~~ A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a length and defining external threads extending substantially entirely along said length, said external threads are being circumferentially interrupted by a pair of oppositely disposed truncated side walls to define a pair of threaded arcuate side walls extending along said length, said elongate body at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into said elongated body.

27. (Previously Presented) The fusion device according to claim 26, wherein said pair of threaded arcuate side walls are tapered along a substantial portion of said length of said elongate body.

28. (Previously Presented) The fusion device according to claim 26, wherein said elongate body defines a hollow interior, said pair of threaded arcuate side walls each defining at

least one opening extending therethrough in communication with said hollow interior.

29. (Previously Presented) The fusion device according to claim 28, further comprising a bone growth inducing material disposed within said hollow interior.

30. (Previously Presented) The fusion device according to claim 19, wherein said elongate body has a substantially solid configuration.

31. (Currently Amended) ~~The fusion device according to claim 19,~~ A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a length and defining external threads extending substantially entirely along said length, said elongate body ~~has~~ having a first diameter adjacent a first end thereof and a larger second diameter adjacent an opposite second end thereof, said first and second diameters sized to be greater than the disc space between the adjacent vertebrae, said elongate body at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into said elongated body.

32. (Currently Amended) A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a hollow interior and at least one opening in communication with said hollow interior, said elongate body being substantially continuously tapered along said length and at least partially formed of a porous biocompatible material to permit bone tissue

ingrowth into said elongated body.

33. (Previously Presented) The fusion device according to claim 32, further comprising a bone growth inducing material disposed within said hollow interior.

34. (Previously Presented) The fusion device of claim 32, wherein said porous biocompatible material is a composite comprising an open-celled substrate having interconnected porosity, said substrate infiltrated with a metal.

35. (Previously Presented) The fusion device of claim 34, wherein said open-celled substrate is a carbonaceous material.

36. (Previously Presented) The fusion device of claim 34, wherein said metal comprises a group VB metal.

37. (Previously Presented) The fusion device of claim 32, wherein said elongate body has a length and defines external threads extending substantially entirely along said length.

38. (Currently Amended) ~~The fusion device of claim 37, wherein~~ A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a hollow interior and at least one opening in communication with said hollow interior, said elongate body having a length and defining external threads

extending substantially entirely along said length, said external threads are being
circumferentially interrupted by a pair of oppositely disposed truncated side walls to define a pair
of threaded arcuate side walls extending along said length, said at least one opening extending
through a corresponding one of said threaded arcuate side walls, said elongate body at least
partially formed of a porous biocompatible material to permit bone tissue ingrowth into said
elongated body.

39. (Currently Amended) ~~The fusion device of claim 32, wherein~~ A fusion device for
facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:

an elongate body having a hollow interior and at least one opening in communication
with said hollow interior, said elongate body has having a length and includes including a pair of
oppositely disposed truncated side walls and a pair of arcuate side walls extending therebetween
along said length, said elongate body at least partially formed of a porous biocompatible material
to permit bone tissue ingrowth into said elongated body.

40. (Currently Amended) A fusion device for facilitating arthrodesis in a disc space
between adjacent vertebrae, comprising:

an elongate body having a length and including a pair of oppositely disposed arcuate side
walls extending along said length and adapted for engagement with the adjacent vertebrae and a
pair of truncated side walls extending between said arcuate side walls, said elongate body having
a hollow interior and at least one opening in communication with said hollow interior and being
at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into

said arcuate side walls.

41. (Previously Presented) The fusion device of claim 40, wherein said porous biocompatible material is a composite comprising an open-celled substrate having interconnected porosity, said substrate infiltrated with a metal.

42. (Previously Presented) The fusion device of claim 41, wherein said open-celled substrate is a carbonaceous material.

43. (Previously Presented) The fusion device of claim 41, wherein said metal comprises a group VB metal.

44. (Currently Amended) ~~The fusion device of claim 40, wherein~~ A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:
an elongate body having a length and including a pair of oppositely disposed arcuate side walls extending along said length and adapted for engagement with the adjacent vertebrae, said arcuate side walls define defining external threads extending substantially entirely along said length, said elongate body at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into said arcuate side walls.

45. (Currently Amended) The fusion device of claim 40 44, further comprising a pair of truncated side walls extending between said arcuate side walls.

46. (Currently Amended) The fusion device of claim 40 44, wherein said elongate body has a hollow interior and at least one opening in communication with said hollow interior.

47. (Previously Presented) The fusion device according to claim 46, further comprising a bone growth inducing material disposed within said hollow interior.

48. (Previously Presented) The fusion device of claim 46, wherein said at least one opening extends through a corresponding one of said arcuate side walls.

49. (Currently Amended) The fusion device according to claim 40 44, wherein said elongate body has a substantially solid configuration.

50. (Currently Amended) ~~The fusion device of claim 40, wherein said~~ A fusion device for facilitating arthrodesis in a disc space between adjacent vertebrae, comprising:
an elongate body having a length and including a pair of oppositely disposed arcuate side walls extending along said length and adapted for engagement with the adjacent vertebrae, said elongate body is being substantially continuously tapered along said length to define a substantially conical configuration and being at least partially formed of a porous biocompatible material to permit bone tissue ingrowth into said arcuate side walls.